

## Quiz (10 points)

**Complete the questions in 30 minutes without using Matlab.**

**Q1 (2 points).** What is the output of executing the following Matlab code?

```
clear;
for i=1:3
    for j=i:3
        M(i, j) = i+j;
        M(j, i) = j-i;
    end
end
M
```

**Q2 (2 points)** Create a variable called result. Assign it a value of zero. Then create FOR loops such that when completed, the variable result holds the value of the sum

$$1*(2+3+\dots+100) + 2*(3+4+5+\dots+101) + 3*(4+5+6+\dots+102) + \dots + 100*(101+102+\dots+199)$$

**Q3 (2 points).** Suppose  $x = [-1, 0, 3, 6]$  and  $y = [0, 3, 1, -3]$ , work out the results of the following expressions

(a)  $x + (\sim y)$

(b)  $x > 3*y$

**Q4. (2 points)** Using a set of nested for-loops and one or more if-statements to obtain a matrix that has the following matrix elements: (Do not type the numbers explicitly).

M =

11	12	13	14	15	-1
11	12	13	14	-1	16
11	12	13	-1	15	16
11	12	-1	14	15	16
11	-1	13	14	15	16
-1	12	13	14	15	16

**Q5. (2 points)** Rewrite the following statements to use only one if statement.

```
if x ~= y
  if z < 10
    w = x*y*z;
  else
    w = -x*y*z;
  end
end
```